

Amendments to the Claims:

1. – 59. (cancelled)

60. (new) An isolated nucleic acid molecule having nucleotides 206-2603 of SEQ ID NO: 1 and variants thereof that are at least 85% identical to nucleotides 206-2603 of SEQ ID NO: 1 encoding a urease protein that catalyzes the hydrolysis of urea.

61. (new) The variants of claim 60, wherein said variants are at least 94% identical to nucleotides 206-2603 of SEQ ID NO: 1.

62. (new) A recombinant DNA molecule comprising the isolated nucleic acid molecule of claim 60 or said variants thereof, wherein said isolated nucleic acid molecule or said variants thereof are under the control of a functionally linked promoter.

63. (new) A live recombinant carrier comprising the recombinant DNA molecule of claim 62.

64. (new) A host cell comprising the nucleic acid molecule of claim 60 or said variants thereof.

65. (new) A host cell comprising the recombinant DNA molecule of claim 62.

66. (new) A host cell comprising the live recombinant carrier of claim 63.

67. (new) An immunogenic composition comprising an immunogenically effective amount of the nucleic acid molecule of claim 60 or said variants thereof under the control of a promoter that is operably linked to said nucleic acid molecule or said variants thereof and a pharmaceutically acceptable carrier.

68. (new) The immunogenic composition of claim 67, further comprising an adjuvant.

69. (new) The immunogenic composition of claim 67, further comprising an additional antigen derived from a virus or microorganism which is pathogenic to mammals.

70. (new) The immunogenic composition of claim 69, wherein said virus or microorganism pathogenic to mammals is selected from the group consisting of Feline Infectious Peritonitis virus, Feline Immune deficiency virus, Canine Parvovirus, Feline Parvovirus, Distemper virus, Adenovirus, Calicivirus, *Bordetella bronchiseptica*, *Borrelia burgdorferi*, *Leptospira interrogans*, *Chlamydia* and *Bartonella henseli*.

71. (new) An isolated *Helicobacter felis* urease X subunit polypeptide having SEQ ID NO: 2 and variants thereof that are at least 85% identical to SEQ ID NO: 2 and catalyze the hydrolysis of urea in a combination with an isolated *Helicobacter felis* urease Y subunit polypeptide.

72. (new) The variants of claim 71, wherein said variants are at least 90% identical to SEQ ID NO: 2.

73. (new) The variants of claim 71, wherein said variants are at least 94% identical to SEQ ID NO: 2.

74. (new) The variants of claim 71, wherein said variants are at least 99% identical to SEQ ID NO: 2.

75. (new) An immunogenic composition for combating *Helicobacter felis* infections, comprising antibodies against the polypeptide of claim 71 or said variants thereof.

76. (new) An immunogenic composition, comprising an immunogenically effective amount of the polypeptide according to Claim 71 or said variants thereof and a pharmaceutically acceptable carrier.

77. (new) An isolated *Helicobacter felis* urease Y subunit polypeptide having SEQ ID NO: 3 and variants thereof that are at least 86% identical to SEQ ID NO: 3 and catalyze the hydrolysis of urea in a combination with an isolated *Helicobacter felis* urease X subunit polypeptide.

78. (new) The variants of claim 77, wherein said variants are at least 98% identical to SEQ ID NO: 3.

79. (new) The variants of claim 77, wherein said variants are at least 99% identical to SEQ ID NO: 3.

80. (new) An immunogenic composition for combating *Helicobacter felis* infections, comprising antibodies against the polypeptide of claim 77 or said variants thereof.

81. (new) An immunogenic composition, comprising an immunogenically effective amount of the polypeptide according to Claim 77 or said variants thereof and a pharmaceutically acceptable carrier.